

REMARKS

The present application was filed on July 24, 2003 with claims 1 through 32. Claims 1-32 are pending. Claims 1, 22 and 32 are proposed to be amended herein

In the Office Action, the Examiner rejected claims 9 and 10 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. Claims 1-32 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 1-32 were rejected under 35 U.S.C. §102(e) as being anticipated by Honarvar et al. (United States Patent Application Publication No. 2003/0154406).

10 Section 112 Rejection

The Examiner rejected claims 9 and 10 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention. In particular, the Examiner asserts that the terms “qualitatively correlated” and “quantitatively correlated” are relative terms that render the claim indefinite.

Applicants submit that the term “qualitatively correlated” is not a relative term, and furthermore that this term is well understood by those of ordinary skill in the art. The term “qualitative” is defined on Dictionary.com as “pertaining to or concerned with quality or qualities.” In the original specification, on pages 12 and 13, it is taught that:

20 a further test is performed during step 540 to determine if any of the selected answers can be correlated with the user. In one implementation, one or more correlation rules may be defined to ensure that a given answer is not correlated with the user. For example, if a user selects a telephone number of a person, the information extraction analysis performed during step 540 can determine if there is a predefined relationship between the owner of the telephone number and the user, such as a family member (self, sibling or parent), co-author, colleague or member of the same household (*qualitative correlation rule*).

25 For example, if a user selects a telephone number of a person, the information extraction analysis performed during step 540 determines if there is a predefined relationship between the owner of the telephone number and the user, such as a family member (self, sibling or parent), co-author, colleague or member

of the same household. The analysis correlates the number to the person by analyzing the number of hits obtained by using a search engine (such as Google) where both the person and number appear on the same page. If the number of hits is higher than a chosen threshold, then a positive correlation is said to exist. Alternatively, the information extraction analysis may also use specialized web databases such as www.anywho.com that allow retrieval of information associated with a particular telephone number. The metric in this case is a positive match between the user's answer and the match against the phone entry

Likewise, Applicants submit that the term "quantitatively correlated" is not a relative term, and furthermore that this term is well understood by those of ordinary skill in the art. The term "quantitative" is defined on Dictionary.com as of or pertaining to the describing or measuring of quantity." In the original specification, on the bottom of page 6, it is taught that:

As another example, if a user selects the jersey number of a sports figure and the information extraction techniques reveal that the user is a fan of the sports team on which the sports figure stars, then that selection would be disallowed. This correlation may be *quantitatively weighted*, such that if only one correlation is found, the answer may still be allowed, however if many correlations are found, then the answer is disallowed. Such correlation information may be implemented as one or more correlation rules that are evaluated during the enrollment phase, as discussed further below in conjunction with FIG. 5

Applicants submit that given the basic understanding of the terms "qualitatively correlated" and "quantitatively correlated," as well as the above teachings, a person of ordinary skill in the art can make and use the inventions defined by claims 9 and 10 to employ predefined correlation rules (to) ensure that answers to user selected questions cannot be qualitatively (or quantitatively) correlated with the user.

Applicants respectfully request withdrawal of the rejection under Section 112.

Section 101 Rejection

Claims 1-32 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. In particular, the Examiner asserts that the claims do not produce a tangible result. Independent claims 1, 22 and 32 have been amended to emphasize that a user is

authenticated when the predefined security threshold is satisfied. Applicants submit that all of the claims are now in full compliance with Section 101 and respectfully request withdrawal of the rejection under Section 101.

Section 102 Rejection of Independent Claims

5 Independent claims 1, 22 and 32 were rejected under 35 U S C. §102(e) as being anticipated by Honarvar et al.

With regards to claim 1, for example, the Examiner asserts that Honarvar et al. teaches a method for authenticating a user, comprising obtaining an asserted identity of said user (citing par. 10 [0105]); obtaining a random subset of questions that said user has previously answered (citing par. [0015]), wherein a correlation between said user and said previously answered questions does not violate one or more predefined correlation rules (citing par. [0021]); and presenting one or more questions to said user from said random subset of questions until a predefined security threshold is satisfied (citing pars. [0217] and [0021]).

15 Applicants submit, however, that Honarvar et al. do not disclose or suggest that a correlation between the user and the previously answered questions do not violate one or more predefined correlation rules. The passage in par. [0021] relied upon by the Examiner for this point teaches that:

20 the present invention allows the vendor to assign points to groups of user authentication questions. The user authentication questions can be grouped, for example, according to data sources containing information about the user, such as credit history, demographic and geographic categories, or according to predictive power of questions in the question group, such that more predictive question are asked first. Such grouping and point assignment can improve the overall assessment of a user 25 authentication process.

These aspects are merely directed to the predictive power of questions and the associated ordering of challenge questions. Honarvar et al., however, does not disclose or suggest a set of 30 predefined correlation rules that systematically ensures that a correlation between the user and the answered questions do not violate the one or more predefined correlation rules, as required by each independent claim. In fact, the examples provided by Honarvar et al. would fail the

qualitative correlation criteria of the present invention because it is easy to associate the user with his/her questions just from a database lookup or web search. Thus, Honarvar et al. clearly do not disclose or suggest ensuring that a correlation between the user and the previously answered questions does not violate one or more predefined correlation rules," as required by each independent claim.

The present invention allows one or more correlation rules to be defined to ensure that a given answer is not correlated with the user. These rules are monitored and enforced during an enrollment phase (step 540 of FIG. 5). If it is determined during step 540 that at least one answer can be correlated with the user, then these answers are discarded and the user is requested to select additional questions during step 550

Thus, Honarvar et al. does not disclose or suggest "wherein a correlation between said user and said previously answered questions does not violate one or more predefined correlation rules," as required by each independent claim.

Dependent Claims

Claims 2-21 and 23-31 are dependent on claims 1 and 22, respectively, and are therefore patentably distinguished over Honarvar et al. because of their dependency from independent claims 1 and 22 for the reasons set forth above, as well as other elements these claims add in combination to their base claim.

All of the pending claims are in condition for allowance and such favorable action is earnestly solicited. If any outstanding issues remain, or if the Examiner has any further suggestions for expediting allowance of this application, the Examiner is invited to contact the undersigned at the telephone number indicated below

The Examiner's attention to this matter is appreciated.

Respectfully submitted,

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